

## ABSTRACT

A method and apparatus for reconstructing sessions on a network is described. The method allows for monitoring of quality of service at an application level as well as for understanding application specific events. This allows the method to be used to generate service detail records for usage based on application type for use in billing. It also allows the qualitative and quantitative analysis of quality of service based on application specific parameters. For example, for web applications, quality of service can be measured by the time from requesting a link till the close of the session by delivery of the whole page. Similarly, for voice over IP calls, application events like adding participants and removing participants can be detected and billed accordingly. Also, the quality of service can be measured. For example, the actual latency can be compared to a predetermined latency amount set by a provider for voice over IP calls. Additionally, service detail records can be generated based on application specific events instead of generic flows, so usage billing can be performed based on factors such as a price per minute per leg, etc, with application specific events generated each time a leg is added or dropped. Further, because the periodicity of the output can be controlled on a per application basis, output for voice over IP calls can be generated more often than for other applications. Additionally, embodiments of the invention can reconstruct sessions that are flowing across multiple network devices.